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January 31, 1997

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, DC 20554

Re: IB Docket No. 96-220
Notice of Ex Parte Presentation

Dear Mr. Caton:

Leo One USA Corporation ("Leo One USA"), by its attorneys, hereby notifies the Commission, pursuant to Section 1.1206 of the Commission's rules, of an ex parte presentation to the FCC's staff held earlier today. Copies of the written materials summarizing the presentation are attached. An original and one copy of this notice are being submitted to the Secretary's Office. The members of the Commission staff who attended the meeting are copied below.

Any questions regarding this matter should be directed to the undersigned.

Respectfully submitted,

Robert A. Mazer
Counsel for Leo One USA Corporation

cc: Rudy Baca
Jane Mago
David Siddall

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NVNG MSS ISSUES

Leo One USA

January, 1997

NVNG MSS Issues

1. Will the markets to be served by NVNG MSS operators be competitive if limited to only the 1st Round licensees
2. Will currently allocated spectrum allow the introduction of new global near real-time services
   - Sharing with DMSP and NOAA MetSats
   - Sharing with GE Starsys in the 137-138 MHz band
   - Sharing with Orbcomm in the 148-149.9 MHz band
3. How should the NVNG MSS band plan be formulated
4. How should the Commission process pending applications
   - financial qualification
   - auctions

1. Competitive Analysis

Leo One USA used DOJ/FTC Merger Guidelines to define markets

- Service Categories
  - Tracking, Monitoring, Emergency Services, Messages, Transaction Services
- Coverage
  - Global
  - Nationwide: Ubiquitous
  - Nationwide: Non-Ubiquitous
  - Urban: Pockets of Coverage
- Timeliness
  - Outages in coverage of < 5 minutes
  - Outages in coverage of > 5 minutes and < 30 minutes
  - Outages in coverage of > 30 minutes and < 3 hr.
- Costs
  - Separate markets exist if a low cost provider is able to raise prices by 5% and not cause consumers to shift to other products

TABLE 1: MARKETS AND SUPPLIERS
TRACKING

Tracking	Coverage	Outages	Satellite Systems: Little LEO: Leo One USA	Little LEO: Orbcomm	Little LEO: Starsys	Little LEO: VITA	Big Leo: Big Leo Systems	Geo-synch: Inmarsat	Geo-synch: AMSC (Skycell)	Geo-synch: Omnitracs	Terrestrial Voice & Data: Highwaymaster	Terrestrial Voice & Data: VHF Radio Systems/WaterComm	Terrestrial Voice & Data: Cellular	Terrestrial Voice & Data: Broadband PCS	Terrestrial Voice & Data: SMR	Terrestrial Voice & Data: Geotek	Terrestrial Voice & Data: NexTel	Terrestrial Data: Ram Mobile Data	Terrestrial Data: Ardis	Terrestrial Data: CellNet	Terrestrial Data: Metricom	Terrestrial Data: CDPD	Terrestrial Data: Cellemetry	Terrestrial Data: Pinpoint Comm.	Terrestrial Data: Nexus Tele.	Terrestrial Data: Narrowband PCS
Truck dispatch and monitoring	Global	< 5 minutes	I				m/h	H																		
		> 5 min. & < 30 min	•				•	•																		
		> 30 min. & < 3 hr.	•	L	I		•	•	Hc	Hc																
	Nationwide: Ubiquitous	< 5 minutes	I				m/h	H	H	H																
		> 5 min. & < 30 min	•				•	•	•	•																
		> 30 min. & < 3 hr.	•	L	I		•	•	•	•	Hc		Lc	Lc			Mc	Mc	Mc							
	Nationwide: non-Ubiquitous	< 5 minutes	I				m/h	H	H	H	H		L	L			M	M	M							
		> 5 min. & < 30 min	•				•	•	•	•	•		•	•			•	•	•							
		> 30 min. & < 3 hr.	•	L	I		•	•	•	•	•		•	•	Lc	Mc	•	•	•	Lc	Lc	Mc		Ic		Ic
	Urban / Pockets of Coverage	< 5 minutes	I				m/h	H	H	H	H		L	L	L	M	M	M	M	L	L	M		I		I
		> 5 min. & < 30 min	•				•	•	•	•	•		•	•	•	•	•	•	•	•	•	•		•		•
		> 30 min. & < 3 hr.	•	L	I		•	•	•	•	•		•	•	•	•	•	•	•	•	•	•		•		•
Maritime - commercial shipping	Global	< 5 minutes	I				m/h	H																		
		> 5 min. & < 30 min	•				•	•																		
		> 30 min. & < 3 hr.	•	L	I		•	•	Hc	Hc		Mc														
	Nationwide: Coastal & Waterways	< 5 minutes	I				m/h	H	H	H		M														
		> 5 min. & < 30 min	•				•	•	•	•		•														
		> 30 min. & < 3 hr.	•	L	I		•	•	•	•		•														
Maritime - recreational	Global	< 5 minutes	I				m/h	H																		
		> 5 min. & < 30 min	•				•	•																		
		> 30 min. & < 3 hr.	•	L	I		•	•	Hc	Hc		Mc														
	Nationwide: Coastal & Waterways	< 5 minutes	I				m/h	H	H	H		M														
		> 5 min. & < 30 min	•				•	•	•	•		•														
		> 30 min. & < 3 hr.	•	L	I		•	•	•	•		•														
Tracking - standard containers	Global	< 5 minutes	I				m/h	H																		
		> 5 min. & < 30 min	•				•	•																		
		> 30 min. & < 3 hr.	•	L	I		•	•	Hc	Hc																
	Nationwide: Ubiquitous	< 5 minutes	I				m/h	H	H	H																
		> 5 min. & < 30 min	•				•	•	•	•																
		> 30 min. & < 3 hr.	•	L	I		•	•	•	•	Hc		Lc	Lc			Mc	Mc	Mc							
	Nationwide: non-Ubiquitous	< 5 minutes	I				m/h	H	H	H	H		L	L			M	M	M							
		> 5 min. & < 30 min	•				•	•	•	•	•		•	•			•	•	•							
		> 30 min. & < 3 hr.	•	L	I		•	•	•	•	•		•	•	Lc	Mc	•	•	•	Lc	Lc	Mc		Ic		Ic
	Urban / Pockets of Coverage	< 5 minutes	I				m/h	H	H	H	H		L	L	L	M	M	M	M	L	L	M		I		I
		> 5 min. & < 30 min	•				•	•	•	•	•		•	•	•	•	•	•	•	•	•	•		•		•
		> 30 min. & < 3 hr.	•	L	I		•	•	•	•	•		•	•	•	•	•	•	•	•	•	•		•		•

Many Markets Have Few or No Substitutes

- Terrestrial Data Providers
  - can serve many markets as a low-cost provider but have limitations on coverage capabilities
- Geostationary Fixed Satellite Service
  - can serve many markets but have limitations on cost, CPE, global coverage
- Big LEOs
  - can serve many markets but have limitations on cost
- Foreign NVNG MSS Systems
  - no authorization to operate in this spectrum -- many are paper applications or meteorological

Many Markets for Low-Cost Data Services are not Competitive

- 34% of markets cannot be served by any 1st Round Little LEO System - greatest opportunity for public benefit
- 19% of markets can be served by Orbcomm and STARSYS - duopoly at best, possibly a monopoly
- 47% of markets have varying degrees of competition from multiple suppliers of data services
  - Cellular, Broadband PCS
  - SMR
  - Terrestrial Data Networks

Grant of Pending Applications of 1st Round Licensees Will Prevent Introduction of New Competitive NVNG MSS Services

- Grant of modification applications of 1st round licensees will prevent licensing of new systems in the 137-138 MHz downlink band
- Grant of the licensees' requests will prevent second round systems from using the 149.9-150.05 MHz band for feeder uplinks

Grant of New 2nd Round NVNG MSS Licenses Will Serve Public Interest

- New services will be made available to the public that will not be provided by existing licensees
- Introduction of competitive services in markets to be served by Orbcomm and/or GE Starsys
- Economic impact resulting from the construction, launch and operation of approximately 100 new satellites

2. Sharing With Existing Systems in Currently Allocated Spectrum Will Allow the Introduction of Global Near Real Time Services

Sharing Issues

- Sharing with NOAA and DOD MetSats is feasible
- Sharing with Orbcomm in the 148-149.9 MHz band is feasible
- Sharing with GE Starsys in the 137-138 MHz band is feasible

Time Sharing Spectrum with MetSats is Readily Achievable

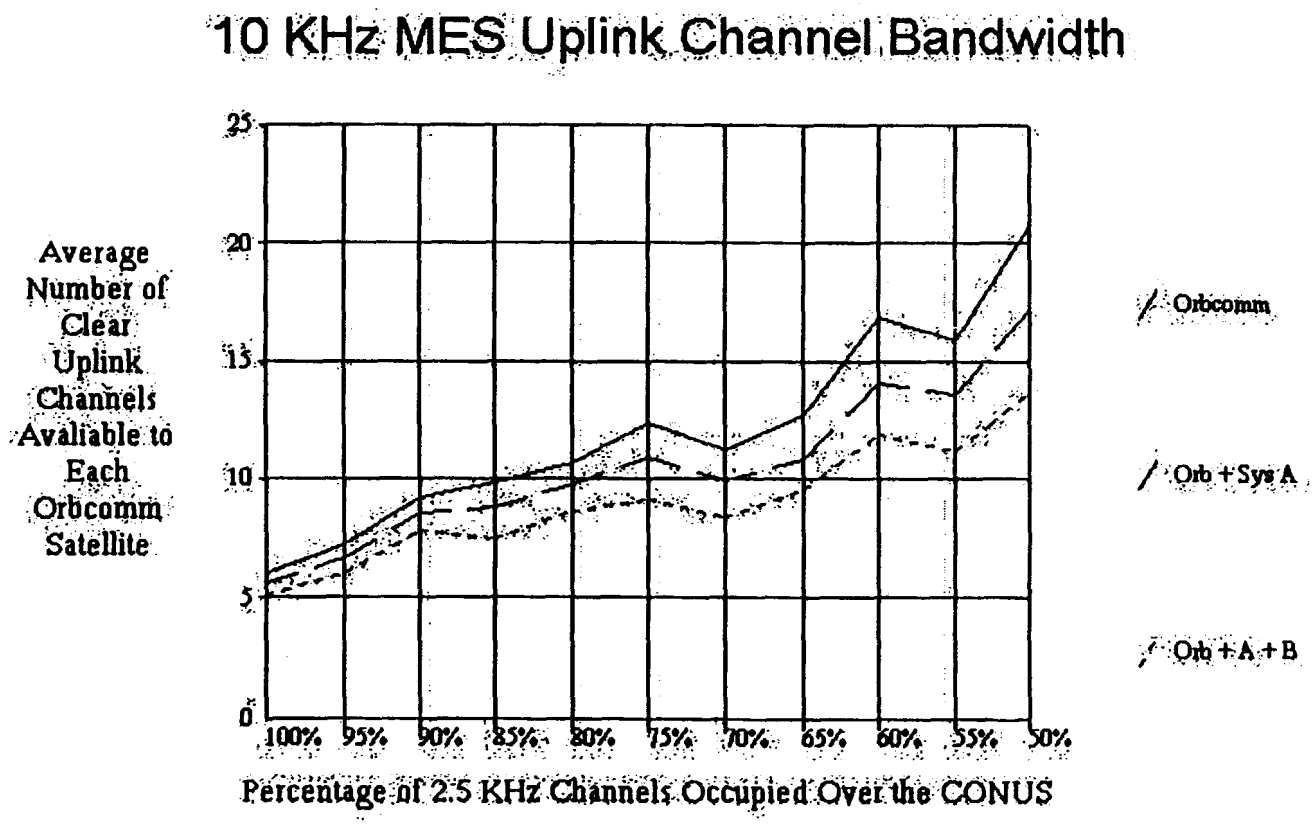
- Sharing and interference avoidance methodologies are well developed, economical, and readily employed
- Band hopping from one MetSat channel to another MetSat channel will have no cost impact on the Leo One USA subscriber terminals:
  - this capability is inherent in the Leo One USA subscriber terminals irrespective of time sharing with MetSats
  - provision of near real-time requires the use of different downlink channels by the subscriber unit
  - DCAAS requires hopping on uplink

Sharing with Orbcomm in the 148 - 149.9 MHz Band

- Orbcomm has repeatedly stated that sharing with additional entrants is feasible
- Orbcomm's own analysis indicates additional entry is viable
- A study employing ITU-R approved methodologies* for assessing sharing indicates that multiple system operation in shared U/L spectrum is viable

* reference ITU-R M.1039 and ITU-R 8D/Temp/133-E - Methods For Modelling Frequency Sharing Between Stations in the Land Mobile Service Below 1 GHz and Non-Geostationary Satellite Orbit (Non-GSO) Mobile Earth Stations

Simulation Studies Demonstrate Uplink Sharing Feasibility (cont)



3. The Band Plan

The Commission should adopt a Band Plan that will allow the introduction of new NVNG MSS systems capable of providing near real-time services to terrestrial, aeronautical and maritime users around the world.

Remaining Spectrum Should be Assigned to Enhance Competition

- Near real-time systems must be licensed
  - Commentors agree that near real-time services provide the greatest public benefit in serving customer demand
  - Near real-time systems (continuous coverage) quantifiably demonstrate the most efficient use of public spectrum resources
    - smaller systems with coverage gaps do not maximize potential use of spectrum e.g. a paging company with a nationwide license that chooses to only buildout a few markets in effect warehouses spectrum relative to a 2nd paging company that builds a large number of markets reusing the same quantity of spectrum
- Licensees must be able to offer worldwide coverage
- Licensees must be on equal footing in terms of the ability to serve terrestrial, aeronautical and maritime users

The Commission's Proposal for Little LEO Systems 1, 2, & 3 Can be Improved Upon in the Interest of Maximizing the Public Benefit

- System 1 has too little capacity to be economically viable
  - 5.7% of the capacity Orbcomm
- System 2 is non-optimal
- System 3 has too little U/L capacity to be economically viable and is competitively handicapped
  - 16% of the capacity of Orbcomm
  - prohibited from serving 2 out of the 3 possible service categories
    - terrestrial - yes
    - maritime - no
    - aeronautical - no

Spectrum Requirements for Deploying a Near-Real-Time Constellation

- A near real-time constellation requires a large number of satellites to support continuous coverage
  - Leo One USA plans to deploy 48 satellites
- Overlapping footprints resulting from continuous coverage requires sufficient spectrum to manage self interference
- The large investment in infrastructure required to achieve continuous coverage requires sufficient system capacity to generate a return on investment

Leo One USA's Proposal for New Little LEO Systems A and B Best Serves the Public Interest

- Systems A &B
  - capable of supporting a near-real-time system
  - 90% of the capacity of Orbcomm
  - able to serve all 3 service categories
- Commentors support the Leo One USA band plan
  - CTA recommends the Commission adopt the Leo One USA band plan adding that System A or B may be able to accommodate multiple small systems instead of one near real-time
  - FACS supports as a viable option adding that System A or B may be able to additionally support a small constellation

TABLE4: HHI Analysis

Potential Licensing Outcomes

1 Today's environment

Licensee	Orbcomm, Starsys & VITA each fully deploy licensed systems			VITA operates in specialized non-for-profit market			Starsys fails to launch its system			Neither VITA or Starsys participate in the market		
	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI
Orbcomm	1	76.51%	5854	1	80.00%	6400	1	94.61%	8951	1	100.00%	10000
Starsys	0.25	19.13%	366	0.25	20.00%	400	0	0.00%	0		0.00%	0
VITA	0.057	4.36%	19	0	0.00%	0	0.057	5.39%	29		0.00%	0
	1.31		6239	1.25		6800	1.06		8980	1.00		10000
	Market Concentration		6239	Market Concentration		6800	Market Concentration		8980	Market Concentration		10000

2 No new licensing, Orbcomm 2nd round ammendment is accepted.

Licensee	Orbcomm, Starsys & VITA each fully deploy licensed systems			VITA operates in specialized non-for-profit market			Starsys fails to launch its system			Neither VITA or Starsys participate in the market		
	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI
Orbcomm	1.16	79.07%	6253	1.16	82.27%	6768	1.16	95.32%	9085	1.16	100.00%	10000
Starsys	0.25	17.04%	290	0.25	17.73%	314	0	0.00%	0		0.00%	0
VITA	0.057	3.89%	15	0	0.00%	0	0.057	4.68%	22		0.00%	0
	1.47		6558	1.41		7083	1.22		9107	1.16		10000
	Market Concentration		6558	Market Concentration		7083	Market Concentration		9107	Market Concentration		10000

3 Three additional licenses awarded as proposed in Systems 1, 2, & 3 by the NPRM.

Licensee	Orbcomm, Starsys & VITA each fully deploy licensed systems			VITA operates in specialized non-for-profit market			Starsys fails to launch its system			Neither VITA or Starsys participate in the market		
	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI
Orbcomm	1	42.30%	1789	1	43.35%	1879	1	47.30%	2238	1	48.61%	2363
Starsys	0.25	10.58%	112	0.25	10.84%	117		0.00%	0		0.00%	0
VITA	0.057	2.41%	6		0.00%	0	0.057	2.70%	7		0.00%	0
System 1	0.057	2.41%	6	0.057	2.47%	6	0.057	2.70%	7	0.057	2.77%	8
System 2	0.84	35.53%	1263	0.84	36.41%	1326	0.84	39.74%	1579	0.84	40.84%	1668
System 3	0.16	6.77%	46	0.16	6.94%	48	0.16	7.57%	57	0.16	7.78%	61
	2.36		3175	2.31		3328	2.11		3831	2.06		4039
	Market Concentration		3175	Market Concentration		3328	Market Concentration		3831	Market Concentration		4039

4 Two additional licenses awarded as proposed in System A & B by Leo One USA.

Licensee	Orbcomm, Starsys & VITA each fully deploy licensed systems			VITA operates in specialized non-for-profit market			Starsys fails to launch its system			Neither VITA or Starsys participate in the market		
	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI	Capacity	Market Share	HHI
Orbcomm	1	31.98%	1023	1	32.57%	1061	1	34.76%	1208	1	35.46%	1257
Starsys	0.25	7.99%	64	0.25	8.14%	66		0.00%	0		0.00%	0
VITA	0.057	1.82%	3		0.00%	0	0.057	1.98%	4		0.00%	0
System A	0.9	28.78%	828	0.9	29.32%	859	0.9	31.28%	979	0.9	31.91%	1019
System B	0.92	29.42%	866	0.92	29.97%	898	0.92	31.98%	1023	0.92	32.62%	1064
	3.13		2784	3.07		2885	2.88		3213	2.82		3340
	Market Concentration		2784	Market Concentration		2885	Market Concentration		3213	Market Concentration		3340

4. The Processing of the Pending Applications

- Three large near real-time systems can not be accommodated in the existing bands.
- Mutual exclusivity therefore exists for the new pending NVNG MSS systems.

Processing Procedure

- The Commission should release Report and Order by the end of February
- The Commission should adopt Domsat Financial Qualification Standard
- Concurrently, it should dismiss the pending applications of all existing licensees and applicants affiliated with existing licensees

Processing Procedure (cont'd)

- Remaining applicants should be required to amend their applications to demonstrate compliance with Domsat financial qualification standard and new technical rules
- As proposed in the Notice, Applicants should be provided the opportunity to apply for any and all segments
- Those applicants that cannot demonstrate financial qualifications should be dismissed or deferred

Processing Procedure (cont'd)

- If mutual exclusivity is eliminated for all band segments as a result of this process, the remaining applicants should be immediately granted licenses.
- If mutual exclusivity still exists in any band segments, the Commission should proceed to auction the spectrum.